

# Harvest of the Month

Network for a Healthy California



## Nutrition Facts

Serving Size: ½ cup asparagus, cooked (90g)	
Calories 20	Calories from Fat 2
	% Daily Value
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 13mg	1%
Total Carbohydrate 4g	1%
Dietary Fiber 2g	7%
Sugars 1g	
Protein 2g	
Vitamin A 18% Vitamin C 12% Calcium 2% Iron 5%	

Source: [www.nutritiondata.com](http://www.nutritiondata.com)

For nutrition information in bar graph format, visit the *Educators' Corner* at [www.harvestofthemonth.com](http://www.harvestofthemonth.com).

**ASPARAGUS**  
April

## Health and Learning Success Go Hand-in-Hand

A school garden is a great way to introduce students to fruits and vegetables. Research shows that students who grow their own fruits and vegetables are more likely to eat and select them at meals. Studies also show that students who eat more fruits and vegetables and get at least 60 minutes of physical activity each day perform better on standardized tests. Help your students do their best during Spring testing. Implement **Harvest of the Month** and connect to core curricula, the cafeteria, home and community.

## Exploring California Asparagus

### Tools:

- Green asparagus spears; harvest fresh asparagus from school garden
- One spear per student plus two additional raw spears per group
- Cutting board and knives (two per group)
- White board and pens

### Sensory Exploration Activity:

- Distribute two raw spears to each student group
- Instruct students to identify and record the external parts
- Have students cut spears crosswise and lengthwise; identify and record internal structure
- Cook remaining spears (one per student) about two to five minutes in water
- Discuss changes that occur as asparagus cooks (e.g., smell, color, texture)
- When cool, slice spears into thirds and have students taste the tip, center and end; record differences
- Poll students to find out if they prefer one section over another and why

### For more ideas, reference:

*Kids Cook Farm-Fresh Food*, CDE, 2002.

## Cooking in Class: Marinated Salad

### Ingredients:

**Makes 32 tastes at ¼ cup each**

- 2 cups cauliflower, chopped
- 2 cups mushrooms, sliced
- 2 cups asparagus, sliced on diagonal
- 2 (14-ounce) cans artichoke hearts, drained, quartered\*
- ¾ cup reduced-fat red wine vinaigrette
- 10 cups tightly packed spinach leaves

Steam or microwave cauliflower, mushrooms and asparagus until asparagus is tender-crisp. Place in medium bowl with artichoke hearts and toss with half of dressing. Tear spinach into bite-sized pieces and toss with remaining dressing in large bowl. Top with marinated vegetables and serve (warm or chilled).

\*Cans packed in water.

Adapted from:

[www.fruitsandveggiesmatter.gov](http://www.fruitsandveggiesmatter.gov)

## Reasons to Eat Asparagus

**One serving of green asparagus provides:**

- An excellent source of Vitamin K and folate (a B-complex vitamin).
- A good source of Vitamin C.
- A source of the antioxidants glutathione and rutin, precursors to Vitamin A.

**According to the National Cancer Institute, asparagus contains more glutathione than any other fruit or vegetable. This antioxidant plays an important role in the prevention of certain cancers and diseases, nutrient metabolism and regulating DNA and protein synthesis.**

For comparative nutrient information of green and white asparagus varieties, visit the *Educators' Corner* at [www.harvestofthemonth.com](http://www.harvestofthemonth.com).

## April Events

- National Cancer Control Month
- National Garden Month
- National TV-Turnoff Week



## How Much Do I Need?

A serving of asparagus is about one-half cup cooked asparagus, which is about five medium spears. Remind students to eat a variety of colorful fruits and vegetables throughout the day to help reach their total daily needs.

### Recommended Daily Amounts of Fruits and Vegetables\*

Kids, Ages 5-12	Teens, Ages 13-18	Adults, 19+
2½ - 5 cups per day	3½ - 6½ cups per day	3½ - 6½ cups per day

\*Ranges take into account three activity levels: sedentary, moderately active and active. For example, active individuals should aim to eat the higher number of cups per day. Visit [www.mypyramid.gov](http://www.mypyramid.gov) to learn more.

## Eat Your Colors

Fruits and vegetables come in a rainbow of colors. Eat a variety of colorful fruits and vegetables every day — red, yellow/orange, white, green and blue/purple. These may lower the risk of some cancers. While white and purple asparagus varieties exist, asparagus is categorized in the green color group for its nutrient content.

Color Group	Health Benefits	Examples of Fruits and Vegetables
Green	Help maintain vision health and strong bones and teeth	Asparagus, green bell peppers, celery, chile peppers, collard greens, cucumber, dandelion greens, fennel, green tomatoes, herbs, limes, spinach, yard-long beans, zucchini

For more information, visit:  
[www.fruitsandveggiesmatter.gov](http://www.fruitsandveggiesmatter.gov)

## What's in a Name?

**Pronunciation:** ə-spär'ə-gəs  
**Spanish name:** espárrago  
**Family:** Liliaceae  
**Genus:** *Asparagus*  
**Species:** *A. officinalis*



A perennial member of the Lily family, asparagus is also related to onions, leeks and garlic. Derived from the Greek word *aspharagos* meaning “sprout” or “shoot,” asparagus was known as *sperage* and referred to as “sparrow grass” by English-speaking Europeans until the late 19th century.

Asparagus can be harvested in three different colors: green, white and purple. Green asparagus is most commonly grown. White asparagus is grown by burying the crowns under a foot of soil preventing photosynthesis. Purple asparagus spears turn green when cooked. While there are several varieties of each color, they are most commonly marketed by their color (e.g., *green asparagus*, etc.).

For more information, visit:  
[www.cfaitc.org/Commodity/pdf/Asparagus.pdf](http://www.cfaitc.org/Commodity/pdf/Asparagus.pdf)  
[www.ohioline.osu.edu/b826/b826\\_2.html](http://www.ohioline.osu.edu/b826/b826_2.html)

## Adventurous Activities

### History Exploration:

Asparagus has been cultivated for more than 2,500 years by people worldwide. It continues today to be a universal vegetable, grown and consumed in Asia, Europe, South America and North America. Have students research a historical topic of interest and then write an essay or deliver a living history presentation. Topics may include:

- Research the early beginnings of the California asparagus industry. Who were the first people to start growing asparagus? Why did growers produce more green asparagus? When and why did fresh asparagus become more common than canned or frozen asparagus?
- Research the medicinal uses of asparagus. Hypothesize why asparagus was used for these purposes.
- Choose a culture, group of people or country and research the role asparagus has played in its society or agricultural economy. Include significant recipes, holidays, medicinal uses, literature and/or economical impact.

For more ideas, visit:  
[www.harvestofthemonth.com](http://www.harvestofthemonth.com)

## School Garden: Welcome the Birds

Birds help pollinate plants, which supports fruit and seed production. They also eat insect pests and add beauty to the garden. Providing food, shelter, water or nesting materials will engage students and encourage birds to visit. Younger students can build a birdhouse and older students can track and identify bird species that visit the garden.

### Tips to Attract Birds:

- Plant long, tubular nectar flowers to attract hummingbirds
- Grow grain plants (sunflowers, amaranth, millet) to attract seed-eating birds
- Let daisy-like flowers dry out and go to seed in garden
- Set out yarn, string, animal hair/fur, pine needles and twigs as nesting materials

### Tools to build a birdhouse:

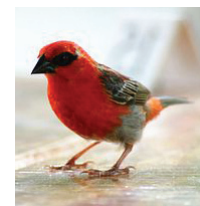
- Milk carton (one per student or group of students)
- Art supplies (e.g., scissors, yarn, glue, twigs, contact papers, pens, etc.)
- 12-inch stick (for perch)
- String or wire (to hang house)
- Birdseed

### Activity:

- Cut two openings on opposite sides of milk carton (2" x 3")
- Decorate cartons with yarn, twigs, pens, etc.
- Poke 12-inch stick into carton beneath both doors
- Tie string to top of carton to hang outdoor
- Fill bottom of carton with birdseed
- Observe feeders daily

Adapted from: [www.lifelab.org](http://www.lifelab.org)

For more information, visit:  
[www.birds.cornell.edu/education](http://www.birds.cornell.edu/education)



## Student Sleuths

- 1 Asparagus is a source of many vitamins, including both water-soluble and fat-soluble vitamins. Make a list of water-soluble and fat-soluble vitamins. Identify the Recommended Daily Intakes (RDI) of these vitamins. How does each vitamin function in your body? What happens when your body is deficient in a certain vitamin?
- 2 Make a list of foods that are main sources for each vitamin. Record your food intake for one day. Determine if you are eating enough fat-soluble and water-soluble vitamins. (Hint: Use the Pantry tool available at [www.nutritiondata.com](http://www.nutritiondata.com) to record your meals and assess nutrient intake.)
- 3 White asparagus is grown from the same crown as green asparagus. Research how farmers grow the white variety. Hypothesize what process occurs (or does not occur) to make the white variety. Identify on a map the regions that produce white asparagus. Compare and contrast nutrient values for white and green asparagus.

### For information, visit:

[www.cfaitc.org](http://www.cfaitc.org)

[www.calasparagus.com](http://www.calasparagus.com)

## Student Advocates

### Promote National TV-Turnoff Week:

- Challenge classmates to keep the TV turned off for one week.
- Make a list of other activities you can do in place of watching TV. **Examples may include:**
  - Playing a game (soccer, basketball, softball, tag); jumping rope; dancing; gardening; walking the dog; hiking
- Encourage classmates to write journal entries of what they do in lieu of watching TV.

### Celebrate National Garden Month:

- Start an after-school gardening club.
- Make arrangements with school officials to stay on campus after hours to work in the school garden.
- Talk to your neighbors about planting a community garden.

### For more ideas, visit:

[www.tvturnoff.org](http://www.tvturnoff.org)

[www.nationalgardenmonth.org](http://www.nationalgardenmonth.org)

## How Does Asparagus Grow?

Asparagus is a long-lasting perennial plant (about 15 to 20 years) that requires about three years from time of planting to establish permanent roots and produce quality spears. The plants are most commonly grown from one-year-old crowns (an underground stem from which the spears shoot), providing a crop more quickly than if grown from seed. The edible stalks are shoots that develop into fern-like plants in warmer temperatures if uncut.

Asparagus requires a period of dormancy. This dormancy occurs naturally in California during winter when cooler temperatures inhibit plant growth. In the first year, it is essential for ferns to develop and for the spears to not be harvested in order for the roots to develop.

Temperature	Above 50 F
Soil	Well-drained, sandy loam
Planting	Trenches about 8 inches deep by 12 inches wide; rows spaced 4 to 6 feet apart
Irrigation	Well-irrigated in first year, then during fern season; avoid watering during harvest season
Harvesting	Hand-harvested when spears are 6 to 10 inches long; spears cut 1 to 2 inches below or about 2 inches above the ground

### For more information, visit:

<http://aggie-horticulture.tamu.edu/extension/easygardening/asparagus/asparagus.html>

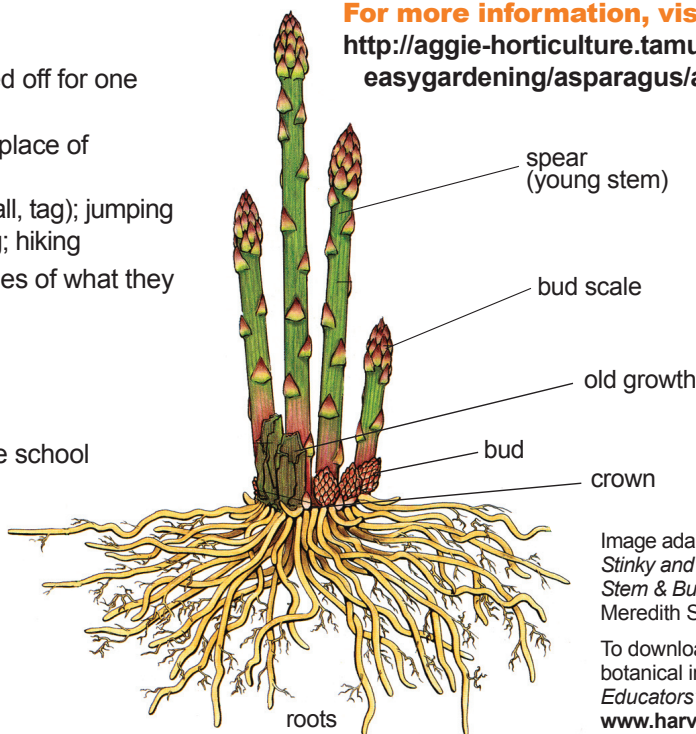


Image adapted from:  
*Stinky and Stringy:  
Stem & Bulb Vegetables*,  
Meredith Sayles Hughes, 1999.

To download reproducible  
botanical images, visit the  
*Educators' Corner* at  
[www.harvestofthemonth.com](http://www.harvestofthemonth.com).

## Home Grown Facts

- California is the nation's leading supplier of asparagus, producing nearly half (48%) of the U.S. supply at a total value of \$115 million.
- San Joaquin County produces two-fifths (40%) of the State's asparagus supply.
- Asparagus' harvest season lasts two to three months, but California's geography allows for fresh asparagus to be available from January through September.

- Other top-producing counties include Monterey (20%), Fresno (18%), Imperial (10%) and Sacramento (3%).
- Ninety-eight percent of California's asparagus crop is marketed as the fresh green variety, with the remaining 2 percent for processing or sold as the white and purple varieties.

2004 Data

### For more information, visit:

[www.cdca.ca.gov/card/pdfs/7cdfaexport.pdf](http://www.cdca.ca.gov/card/pdfs/7cdfaexport.pdf)

[www.nass.usda.gov/Statistics\\_by\\_State/](http://www.nass.usda.gov/Statistics_by_State/)



## Just the Facts

- Asparagus cooks fast — Roman Emperor Augustus coined the phrase “velocius quam aspargi coquantur” which means “faster than you can cook asparagus.” Over the years, this has been shortened to “in a flash.”
- Per one-half cup serving, asparagus has the highest content of folate of any vegetable.
- Ancient and medieval medicinal practices used crushed asparagus tips to reduce swelling and alleviate pains associated with bee stings, wounds and infections.
- In proper conditions, asparagus can grow as much as one inch per hour — up to 12 inches in one day.

Sources:

[www.fruitsandveggiesmatter.gov/month/asparagus.html](http://www.fruitsandveggiesmatter.gov/month/asparagus.html)  
[www.calasparagus.com](http://www.calasparagus.com)

## A Spear of Asparagus History\*

- Asparagus cultivation began more than 2,500 years ago by the ancient Greeks and Romans. Asparagus was valued both as a food and for medicinal remedies.
- Early English and Dutch colonists brought asparagus to North America.
- In 1852, migrant family workers started growing asparagus in the Stockton-Sacramento Delta.
- Thomas Foon Chew built the first cannery to package green asparagus in Isleton, California in 1919.
- Beginning in the 1950s, U.S. farmers began to grow more green asparagus than white due to consumer preference.
- In the mid-1980s, fresh asparagus was shipped worldwide for the first time by airplanes from California.

\*Visit the *Educators' Corner* at [www.harvestofthemonth.com](http://www.harvestofthemonth.com) for more history.

**For more information, visit:**

[www.cfaitc.org/Commodity/pdf/Asparagus.pdf](http://www.cfaitc.org/Commodity/pdf/Asparagus.pdf)

## Literature Links

- **Elementary:** *Bugs! Bugs! Bugs!* by Bob Barner, *Earthworms: Underground Farmers* by Patricia Lauber and *Inch by Inch: The Garden Song* by David Mallett.
- **Secondary:** *Dictionary of Horticulture* by National Gardening Association, *Good Bugs for Your Garden* by Allison Starcher and *On Good Land: An Autobiography of an Urban Farm* by Michael Ableman.

**For more ideas, visit:**

[www.cfaitc.org/Bookshelf/Bookshelf.php](http://www.cfaitc.org/Bookshelf/Bookshelf.php)

## Physical Activity Corner

Gardening is a great way for students to be active, practice and understand science lessons, and learn valuable life skills. Gardening uses all of the major muscle groups, increases flexibility and helps strengthen joints. Promote students' physical and mental health by celebrating National Garden Month in April. Here are some tips to get started:

- **Warm up** – Stretch for at least five minutes to keep muscles flexible and help prevent injury.
- **Mix it up** – Rotate every 15 to 20 minutes between gardening tasks like raking, weeding, pruning and digging. (Stretch briefly between chores.)
- **Color it in** – Plant a variety of colorful fruits and vegetables. Students can pick different color groups to “harvest.”
- **Cool down** – End gardening session by allowing students to reflect on what they created or maintained. Students can write in journals, pick flowers, harvest crops and enjoy what they have created.

**For more ideas, visit:**  
[www.kidsgardening.com](http://www.kidsgardening.com)



## Cafeteria Connections

Conduct an Asparagus Trivia Contest. Use this newsletter to create sets of trivia information, questions and answers. Following are a few ideas for getting started.

- Create table tents with trivia asparagus factoids.
- Place tents on cafeteria tables.
- Create trivia questions and distribute questionnaire to students in lunch line (or as students enter cafeteria).
- Students find answers while eating meal (from factoids on table tents) and enter their questionnaire into a drawing for prizes.

## Helpful Hints:

- Work with older students, an academic club or science class to gather and create the trivia information.
- Use facts from this newsletter to create tent information or visit [www.calasparagus.com](http://www.calasparagus.com).
- Ask an art class to help you design the table tents.

Adapted from: Team Nutrition, “Food Works,” 1995.

## Next Month: Avocados

